

# RECEIVED

MAY 17 2001

#1651

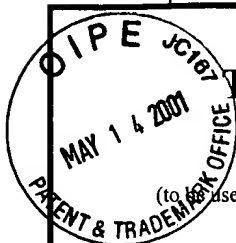
Please type a plus sign (+) inside this box → ☐

TECH CENTER 1600/2000

PTO/SB/21 (08-00)

Approved for use through 10/31/2002. OMB 0651-0031  
U.S. Patent and Trademark Office; U.S. DEPARTMENT OF COMMERCE

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## TRANSMITTAL FORM

(to be used for all correspondence after initial filing)

Application Number Filing Date First Named Inventor Group Art Unit Examiner Name	09/464,416
	12/16/1999
	Yasmin Thanavala et al.
	1651
	M. Flood
Attorney Docket Number Total Number of Pages in This Submission	RPP:156B US 18

### ENCLOSURES (check all that apply)

<input checked="" type="checkbox"/> Fee Transmittal Form <input checked="" type="checkbox"/> Fee Attached <input type="checkbox"/> Amendment / Reply <input type="checkbox"/> After Final <input type="checkbox"/> Affidavits/declaration(s) <input type="checkbox"/> Extension of Time Request <input type="checkbox"/> Express Abandonment Request <input type="checkbox"/> Information Disclosure Statement <input type="checkbox"/> Certified Copy of Priority Document(s) <input type="checkbox"/> Response to Missing Parts/Incomplete Application <input type="checkbox"/> Response to Missing Parts under 37 CFR 1.52 or 1.53	<input type="checkbox"/> Assignment Papers (for an Application) <input type="checkbox"/> Drawing(s) <input type="checkbox"/> Licensing-related Papers <input checked="" type="checkbox"/> Petition <input type="checkbox"/> Petition to Convert to a Provisional Application <input type="checkbox"/> Power of Attorney, Revocation Change of Correspondence Address <input type="checkbox"/> Terminal Disclaimer <input type="checkbox"/> Request for Refund <input type="checkbox"/> CD, Number of CD(s) _____	<input type="checkbox"/> After Allowance Communication to Group <input type="checkbox"/> Appeal Communication to Board of Appeals and Interferences <input type="checkbox"/> Appeal Communication to Group (Appeal Notice, Brief, Reply Brief) <input type="checkbox"/> Proprietary Information <input type="checkbox"/> Status Letter <input type="checkbox"/> Other Enclosure(s) (please identify below):
Remarks		

### SIGNATURE OF APPLICANT, ATTORNEY, OR AGENT

Firm or Individual name	Michael L. Dunn, Dunn & Associates
Signature	
Date	May 8, 2001

### CERTIFICATE OF MAILING

I hereby certify that this correspondence is being deposited with the United States Postal Service with sufficient postage as first class mail in an envelope addressed to: Commissioner for Patents, Washington, DC 20231 on this date:		May 8, 2001
Typed or printed name	Michael L. Dunn	
Signature		Date May 8, 2001

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.

**FREE TRANSMITTAL  
for FY 2001**

Recent fees are subject to annual revision.

AMOUNT OF PAYMENT (\$)**130.00****METHOD OF PAYMENT**

- 1.
- ☐
- The Commissioner is hereby authorized to charge indicated fees and credit any overpayment to:

Deposit  
Account  
Number

04-1790

Deposit  
Account  
NameCharge Any Additional Fee Required  
Under 37 CFR 1.16, 1.17, 1.18 and 1.20Applicant claims small entity status.  
See 37 CFR 1.27

- 2.
- ☒
- Payment Enclosed:



Check



Credit Card



Money Order



Other

**FEE CALCULATION****1. BASIC FILING FEE**

Large Entity Fee Code	Small Entity Fee Code	Fee Description
--------------------------	--------------------------	-----------------

101	710	201 355	Utility filing fee
106	320	206 160	Design filing fee
107	490	207 245	Plant filing fee
108	710	208 355	Reissue filing fee
114	150	214 75	Provisional filing fee

Fee Paid

SUBTOTAL (1)

(\$)

**2. EXTRA CLAIM FEES**

Total Claims	Extra Claims	Fee from below	Fee Paid
20**	X		
3**	X		

Multiple Dependent

Large Entity Fee Code	Small Entity Fee Code	Fee Description
--------------------------	--------------------------	-----------------

103	18	203 9	Claims in excess of 20
102	80	202 40	Independent claims in excess of 3
104	270	204 135	Multiple dependent claim, if not paid
109	80	209 40	**Reissue independent claims over original patent
110	18	210 9	**Reissue claims in excess of 20 and over original patent

SUBTOTAL (2)

(\$)

\*\*or number previously paid, if greater; For Reissues, see above

**FEE CALCULATION (continued)****3. ADDITIONAL FEES**

Fee Code	Large Entity Fee (\$)	Small Entity Fee (\$)	Fee Description	Fee Paid
105	130	205 65	Surcharge - late filing fee or oath	
127	50	227 25	Surcharge - late provisional filing fee or cover sheet	
139	130	139 130	Non-English specification	
147	2,520	147 2,520	For filing a request for ex parte reexamination	
112	920*	112 920*	Requesting publication of SIR prior to Examiner action	
113	1,840*	113 1,840*	Requesting publication of SIR after Examination action	
115	110	215 55	Extension for reply within first month	
116	390	216 195	Extension for reply within second month	
117	890	217 445	Extension for reply within third month	
118	1,390	218 695	Extension for reply within fourth month	
128	1,890	228 945	Extension for reply within fifth month	
119	310	219 155	Notice of Appeal	
120	310	220 155	Filing a brief in support of an appeal	
121	270	221 135	Request for oral hearing	
138	1,510	138 1,510	Petition to institute a public use proceeding	
140	110	240 55	Petition to revive - unavoidable	
141	1,240	241 620	Petition to revive - unintentional	
142	1,240	242 620	Utility issue fee (or reissue)	
143	440	243 220	Design issue fee	
144	600	244 300	Plant issue fee	
122	130	122 130	Petitions to the Commissioner	130
123	50	123 50	Processing fee under 37 CFR 1.17(q)	
126	180	126 180	Submission of Information Disclosure Stmt	
581	40	581 40	Recording each patent assignment per property (times number of properties)	
146	710	246 355	Filing a submission after final rejection (37 CFR § 1.129(a))	
149	710	249 355	For each additional invention to be examined (37 CFR § 1.129(b))	
179	710	279 355	Request for Continued Examination (RCE)	
169	900	169 900	Request for expedited examination of a design application	

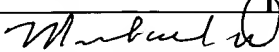
Other fee (specify)

\*Reduced by Basic Filing Fee Paid

SUBTOTAL (3)

(\$)**130.00****SUBMITTED BY**

Complete (if applicable)

Name (Print/Type)	Michael L. Dunn	Registration No. (Attorney/Agent)	25,330	Telephone	716-433-1661
Signature		Date	May 8 2001		

**WARNING: Information on this form may become public. Credit card information should not be included on this form. Provide credit card information and authorization on PTO-2038.**

Burden Hour Statement: This form is estimated to take 0.2 hours to complete. Time will vary depending upon the needs of the individual case. Any comments on the amount of time you are required to complete this form should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, Washington, DC 20231. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Assistant Commissioner for Patents, Washington, DC 20231.



#17/108  
5/18/01  
RPP:156B US

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

RECEIVED

MAY 17 2001

TECH CENTER 1600/2900

Applicants: Yasmin Thanavala et al. Art Unit: 1651  
Serial No: 09/464,416  
Filed: 12/16/1999  
Examiner: M. Flood  
For: ORAL IMMUNOLOGY  
USING PLANT PRODUCT  
CONTAINING A NON-  
ENTERIC PATHOGEN  
ANTIGEN

**PETITION TO CORRECT INVENTORSHIP UNDER 37 C.F.R. §1.48**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

After filing of the above-identified patent application, it was determined that Hugh S. Mason should have been named as a joint inventor.

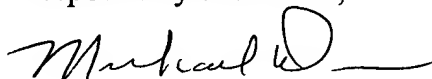
As evidenced by the enclosed Declaration, the above invention was made and reduced to practice by inventors, Yasmin Thanavala, Charles J. Arntzen and Hugh S. Mason. Without deceptive intent at the time of filing, it was not realized that Dr. Hugh S. Mason should have been added as an inventor for being intimately involved in design, creation and characterization of the transgenic plant material used in the studies incorporated into this patent application, which activities took place at his laboratory at Boyce Thompson Institute for Plant Research, Inc., Room 407, Tower Road, Ithaca, New York 14853, either by Dr. Mason or others under his direct supervision.

It is also agreed upon by the two assignees in this patent application, namely Health Research, Inc. and Boyce Thompson Institute for Plant Research, Inc., that Dr. Hugh S. Mason should be added as a co-inventor along with Dr. Yasmin Thanavala and Dr. Charles J. Arntzen as evidenced by the two enclosed Declarations under 37 CFR §1.48(a)(4).

In view of the foregoing and the enclosed Declarations of Yasmin Thanavala, Charles J. Arntzen, Hugh S. Mason and the Assignees, it is hereby respectfully requested that Hugh S. Mason be added as an inventor to the above-identified patent application.

Dated: May 8, 01

Respectfully submitted,



Michael L. Dunn  
Attorney for Applicant(s)  
Reg. No. 25,330  
P.O. Box 10  
Newfane, New York 14108  
Telephone: (716) 433-1661

MLD/csc



RPP:156B US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Yasmin Thanavala et al. Art Unit: 1651  
Serial No: 09/464,416  
Filed: 12/16/1999  
Examiner: M. Flood  
For: ORAL IMMUNOLOGY  
USING PLANT PRODUCT  
CONTAINING A NON-  
ENTERIC PATHOGEN  
ANTIGEN

**CONSENT OF ASSIGNEE TO ADD INVENTORS  
UNDER 37 CFR §1.48(a)(5)**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

WHEREAS, Health Research, Inc., an Assignee of record of the above-identified patent application as recorded in the U.S. Patent and Trademark Office records at Reel 010627 and Frame 0713, and as evidenced by the enclosed copy of the Notice of Recordation of Assignment document;

THAT, Health Research, Inc., has been notified of the situation wherein one inventor not previously named in the above-identified U.S. patent application should be added;

THAT, the originally named inventor Yasmin Thanavala has consented to the addition of the new inventor Hugh S. Mason and that the new inventor Hugh S. Mason

believes he has contributed to the invention and should be subsequently added as an inventor;

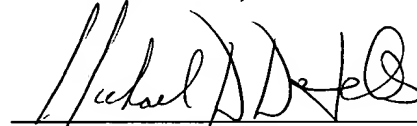
THAT, Health Research, Inc., hereby consents to the addition of the aforementioned inventor, Hugh S. Mason.

THAT, all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: \_\_\_\_\_

5/2/01

For and on Behalf of  
Health Research, Inc.



Michael D. DeLellis  
Director of Operations



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231

MAY 16, 2000

DUNN & ASSOCIATES  
MICHAEL L. DUNN  
P.O. BOX 10  
NEWFANE, NEW YORK 14108

PTAS

DUNN & ASSOCIATES

MAY 30 2000

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\*101297845A\*

**UNITED STATES PATENT AND TRADEMARK OFFICE  
NOTICE OF RECORDATION OF ASSIGNMENT DOCUMENT**

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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/23/2000

REEL/FRAME: 010627/0713  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

ASSIGNOR:

THANAVALA, YASMIN

DOC DATE: 02/10/2000

ASSIGNEE:

HEALTH RESEARCH, INC.  
ELM AND CARLTON STREETS  
BUFFALO, NEW YORK 14263

SERIAL NUMBER: 09464416

PATENT NUMBER:

FILING DATE: 12/16/1999  
ISSUE DATE:

ALLYSON PURNELL, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

03-27-2000



101297845

To the Honorable Commissioner of  
thereof.

the attached original documents or copy

1. Name of conveying party(ies):

Yasmin Thanavala

Feb 23 2000

Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_

Execution Date: February 10, 2000

2. Name and address of receiving party(ies)

Name: Health Research, Inc.

Internal Address: Elm and Carlton Streets

Street Address: same as above

City: Buffalo State: New York ZIP: 14263

Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

09/464,416

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No5. Name and address of party to whom correspondence  
concerning document should be mailed:

Name: Dunn &amp; Associates

Internal Address: P.O. Box 10

Street Address: same as above

City: Newfane State: NY ZIP: 14108

6. Total number of applications and patents involved: 1

7. Total fee (37 CFR 3.41).....\$ 40.00

☒ Enclosed☐ Authorized to be charged to deposit account

8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

03/27/2000 DCOATES 00000040 09464416

01 FC:581

40.00 DP

DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief the foregoing information is true and correct and any attached copy is a true copy of the original document; however, the above information is not to be used to interpret the document which speaks for itself.

Michael L. Dunn

Name of Person Signing

Signature

Feb 15, 2000

Date

Total number of pages including cover sheet, attachments, and document: 3

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents &amp; Trademarks, Box Assignments

Washington, D.C. 20231

**ASSIGNMENT OF INVENTION**

WHEREAS, I, YASMIN THANAVALA residing at 157 Presidio Place, Williamsville, New York 14221, have invented certain new and useful improvements in:

**ORAL IMMUNOLOGY USING PLANT PRODUCT CONTAINING  
A NON-ENTERIC PATHOGEN ANTIGEN**

for which I have made application for Letters Patent in the United States; and for which the specification was filed on December 16, 1999, and assigned U.S. Serial No. 09/464,416;

AND WHEREAS, **HEALTH RESEARCH, INC.**, Roswell Park Cancer Institute, Elm & Carlton Streets, Buffalo, New York 14263, a corporation of the State of New York, is desirous of acquiring all interest in said invention, said application disclosing the invention and any Letters Patent which may be granted therefor:

NOW THIS INDENTURE WITNESSETH, that for the sum of One Dollar, and other valuable consideration to me in hand paid, the receipt whereof is hereby acknowledged, I hereby assign, sell and transfer unto said **HEALTH RESEARCH, INC.**, the entire right, title and interest in said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights, Convention rights, and other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto;

And I hereby authorize and request the Commissioner of Patents to issue said United States Letters Patent to said **HEALTH RESEARCH, INC.**, as the Assignee of the whole right, title and interest thereto;

And I further agree to execute all necessary and lawful future documents, including assignments in favor of **HEALTH RESEARCH, INC.**, or its designee as **HEALTH RESEARCH, INC.**, or its Assignee may from time-to-time present to me in order to perfect title

in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to sign and properly execute such necessary and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and/or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the Assignee thereof shall hereafter require and prepare at its own expense.

✓ WITNESS, my hand and seal this 10 day of February, 2000.

WITNESS:

R. G. Glavin

✓ Yasmin Thanavala  
Yasmin Thanavala

WITNESS:

J. S. Lynch

STATE OF NEW YORK

COUNTY OF Erie SS:

On this 10<sup>th</sup> day of February in the year of 2000, before me, the subscriber, personally appeared YASMIN THANAVALA to me known to be the person described in and who executed the foregoing instrument, and who acknowledged that <sup>s</sup>he executed the same.

[SEAL]

CHERYL A. ZUBER  
Notary Public, State of New York  
No. 4865348  
Qualified in Erie County  
My Commission Expires July 7, ~~2000~~ 2000

Cheryl A. Zuber  
Notary Public



RPP:156B US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Yasmin Thanavala et al. Art Unit: 1651  
Serial No: 09/464,416  
Filed: 12/16/1999  
Examiner: M. Flood  
For: ORAL IMMUNOLOGY  
USING PLANT PRODUCT  
CONTAINING A NON-  
ENTERIC PATHOGEN  
ANTIGEN

**CONSENT OF ASSIGNEE TO ADD INVENTORS  
UNDER 37 CFR §1.48(a)(5)**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

WHEREAS, Boyce Thompson Institute for Plant Research, Inc., an Assignee of record of the above-identified patent application as recorded in the U.S. Patent and Trademark Office records at Reel 010627 and Frame 0726, and as evidenced by the enclosed copy of the Notice of Recordation of Assignment document;

THAT, Boyce Thompson Institute for Plant Research, Inc., has been notified of the situation wherein one inventor not previously named in the above-identified U.S. patent application should be added;

THAT, the originally named inventor Charles J. Arntzen has consented to the addition of the new inventor Hugh S. Mason and that the new inventor Hugh S. Mason

believes he has contributed to the invention and should be subsequently added as an inventor;

THAT, Boyce Thompson Institute for Plant Research, Inc., hereby consents to the addition of the aforementioned inventor, Hugh S. Mason.

THAT, all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

For and on Behalf of  
Boyce Thompson Institute for Plant  
Research, Inc.

Dated: 4/27/01

Typed Name: Joyce L. Frank

Title: Director of Licensing & Intellectual  
Property Management

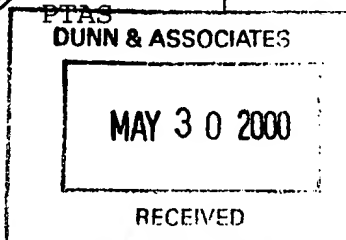
MAY 16, 2000

DUNN & ASSOCIATES  
MICHAEL L. DUNN  
P.O. BOX 10  
NEWFANE, NY 14108



**UNITED STATES DEPARTMENT OF COMMERCE  
Patent and Trademark Office**

ASSISTANT SECRETARY AND COMMISSIONER  
OF PATENTS AND TRADEMARKS  
Washington, D.C. 20231



\*101297846A\*

**UNITED STATES PATENT AND TRADEMARK OFFICE  
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PLEASE REVIEW ALL INFORMATION CONTAINED ON THIS NOTICE. THE INFORMATION CONTAINED ON THIS RECORDATION NOTICE REFLECTS THE DATA PRESENT IN THE PATENT AND TRADEMARK ASSIGNMENT SYSTEM. IF YOU SHOULD FIND ANY ERRORS OR HAVE QUESTIONS CONCERNING THIS NOTICE, YOU MAY CONTACT THE EMPLOYEE WHOSE NAME APPEARS ON THIS NOTICE AT 703-308-9723. PLEASE SEND REQUEST FOR CORRECTION TO: U.S. PATENT AND TRADEMARK OFFICE, ASSIGNMENT DIVISION, BOX ASSIGNMENTS, CG-4, 1213 JEFFERSON DAVIS HWY, SUITE 320, WASHINGTON, D.C. 20231.

RECORDATION DATE: 02/23/2000

REEL/FRAME: 010627/0726  
NUMBER OF PAGES: 3

BRIEF: ASSIGNMENT OF ASSIGNOR'S INTEREST (SEE DOCUMENT FOR DETAILS).

**ASSIGNOR:**

ARNTZEN, CHARLES J.

DOC DATE: 01/24/2000

**ASSIGNEE:**

BOYCE THOMPSON INSTITUTE FOR PLANT  
RESEARCH, INC.  
TOWER ROAD  
ITHACA, NEW YORK 14853-1801

SERIAL NUMBER: 09464416  
PATENT NUMBER:

FILING DATE: 12/16/1999  
ISSUE DATE:

LAWAN FLETCHER, EXAMINER  
ASSIGNMENT DIVISION  
OFFICE OF PUBLIC RECORDS

(Rev. 6-93)

OMB No. 0651-0011 (exp. 4/94)

Patent and Trademark Office

To the Honorable Commissioner of Patents and Trademarks: Please record the attached original documents of  
thereof.

1. Name of conveying party(ies):

**Charles J. Arntzen**Additional name(s) of conveying party(ies) attached? ☐ Yes ☒ No

3. Nature of Conveyance:

☒ Assignment☐ Merger☐ Security Agreement☐ Change of Name☐ Other \_\_\_\_\_Execution Date: **January 24, 2000**

2. Name and address of receiving party(ies)

Name: **Boyce Thompson Institute for  
Plant Research, Inc.**Internal Address: **Tower Road**Street Address: **same as above**City: **Ithaca** State: **New York** ZIP: **14853-1801**Additional name(s) & address(es) attached? ☐ Yes ☒ No

4. Application number(s) or patent number(s):

If this document is being filed together with a new application, the execution date of the application is: \_\_\_\_\_

A. Patent Application No.(s)

**09/464,416**

B. Patent No.(s)

Additional numbers attached? ☐ Yes ☒ No5. Name and address of party to whom correspondence  
concerning document should be mailed:Name: **Dunn & Associates**Internal Address: **P.O. Box 10**Street Address: **same as above**City: **Newfane** State: **NY** ZIP: **14108**6. Total number of applications and patents involved: **1**7. Total fee (37 CFR 3.41).....\$ **40.00**☒ Enclosed☐ Authorized to be charged to deposit account

8. Deposit account number:

(Attach duplicate copy of this page if paying by deposit account)

03/27/2000 DCOATES 00000039 09464416

01 FC:581

40.00 DP

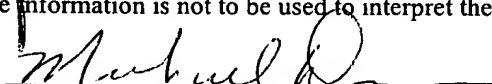
DO NOT USE THIS SPACE

9. Statement and signature.

To the best of my knowledge and belief, the foregoing information is true and correct and any attached copy is a true copy of the original document; however, the above information is not to be used to interpret the document which speaks for itself.

**Michael L. Dunn**

Name of Person Signing

  
Signature**Feb 15, 2000**  
DateTotal number of pages including cover sheet, attachments, and document: **3**

Mail documents to be recorded with required cover sheet information to:

Commissioner of Patents &amp; Trademarks, Box Assignments

Washington, D.C. 20231

**ASSIGNMENT OF INVENTION**

WHEREAS, I, CHARLES J. ARNTZEN residing at 1005 Highland Road, Ithaca, New York 14850-1447, have invented certain new and useful improvements in:

**ORAL IMMUNOLOGY USING PLANT PRODUCT CONTAINING**

**A NON-ENTERIC PATHOGEN ANTIGEN**

for which I have made application for Letters Patent in the United States; and for which the specification was filed on December 16, 1999, and assigned U.S. Serial No. 09/464,416;

AND WHEREAS, BOYCE THOMPSON INSTITUTE FOR PLANT RESEARCH, INC., Tower Road, Ithaca, New York 14853-1801, a corporation of the State of New York, is desirous of acquiring all interest in said invention, said application disclosing the invention and any Letters Patent which may be granted therefor:

NOW THIS INDENTURE WITNESSETH, that for the sum of One Dollar, and other valuable consideration to me in hand paid, the receipt whereof is hereby acknowledged, I hereby assign, sell and transfer unto said BOYCE THOMPSON INSTITUTE FOR PLANT RESEARCH, INC. the entire right, title and interest in said invention, said application, including any divisions and continuations thereof, and in and to any and all Letters Patent of the United States, and countries foreign thereto, which may be granted for said invention, and in and to any and all priority rights, Convention rights, and other benefits accruing or to accrue to me with respect to the filing of applications for patents or securing of patents in the United States and countries foreign thereto;

And I hereby authorize and request the Commissioner of Patents to issue said United States Letters Patent to said BOYCE THOMPSON INSTITUTE FOR PLANT RESEARCH, INC., as the Assignee of the whole right, title and interest thereto;

And I further agree to execute all necessary and lawful future documents, including assignments in favor of BOYCE THOMPSON INSTITUTE FOR PLANT RESEARCH, INC., or its designee as BOYCE THOMPSON INSTITUTE FOR PLANT RESEARCH, INC., or its

Assignee may from time-to-time present to me in order to perfect title in said invention, modifications, and improvements in said invention, applications and Letters Patent of the United States and countries foreign thereto;

And I further agree to sign and properly execute such necessary and lawful papers for application for foreign patents, for filing subdivisions of said application for patent, and/or, for obtaining any reissue or reissues of any Letters Patent which may be granted for my aforesaid invention, as the Assignee thereof shall hereafter require and prepare at its own expense.

WITNESS, my hand and seal this 24<sup>th</sup> day of January, 2000.

WITNESS:

[Signature]

[Signature]  
Charles J. Arntzen

WITNESS:

[Signature]

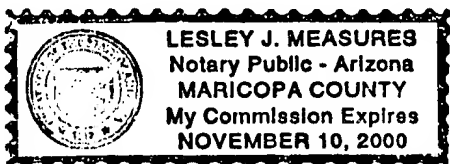
STATE OF NEW YORK

COUNTY OF ~~Thompson~~

SS: 476-42-9235

On this 24<sup>th</sup> day of January in the year of 2000, before me, the subscriber, personally appeared CHARLES J. ARNTZEN to me known to be the person described in and who executed the foregoing instrument, and who acknowledged that he executed the same.

[SEAL]



[Signature]  
Notary Public



RPP:156B US

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

Applicants: Yasmin Thanavala et al. Art Unit: 1651  
Serial No: 09/464,416  
Filed: 12/16/1999  
Examiner: M. Flood  
For: ORAL IMMUNOLOGY  
USING PLANT PRODUCT  
CONTAINING A NON-  
ENTERIC PATHOGEN  
ANTIGEN

**DECLARATION UNDER 37 C.F.R. §1.48(a)(2)**

Commissioner for Patents  
Washington, D.C. 20231

Sir:

Yasmin Thanavala, Charles J. Arntzen and Hugh S. Mason declare:

THAT, Yasmin Thanavala and Charles J. Arntzen were the originally named inventors in the above-identified U.S. Patent Application;

THAT, at the time of filing the above-identified patent application, Yasmin Thanavala and Charles J. Arntzen inadvertently overlooked or did not realize that Hugh S. Mason had made a significant contribution to the conception of the invention through the design, creation and characterization of the transgenic plant material used in the studies incorporated into this patent application;

THAT, after about one year after the filing of the above application, it was brought to the attention of Boyce Thompson Institute for Plant Research, Inc. that Dr. Hugh

Mason should have been added as an inventor and that Yasmin Thanavala, Charles J. Arntzen and Hugh S. Mason all agree that the three of them are joint inventors and Hugh S. Mason should have been named as an inventor in the originally filed patent application;

THAT, the omission of Hugh S. Mason was in error and without deceptive intent;  
and

THAT, all statements made herein of our own knowledge are true and that all statements made on information and belief are believed to be true; and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment, or both, under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issued thereon.

Dated: 24 April, 2001

Yasmin Thanavala  
Yasmin Thanavala

Dated: 17 April, 2001

Charles J. Arntzen  
Charles J. Arntzen

Dated: 27 April 2001

Hugh S. Mason  
Hugh S. Mason